

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 8. (cancelled)

9. (new) Method for operating an engine with a first set of cylinders and a second set of cylinders, the method comprising: operating the first set of cylinders combusting a lean or stoichiometric air-fuel mixture and operating the second set of cylinders with substantially no injected fuel while inducting air; and
transitioning to combusting a lean air-fuel mixture in said second set of cylinders.

10. (new) The method of claim 9 wherein after said transition, both said first and second set of cylinders are operated to combust a lean air-fuel mixture.

11. (new) The method of claim 10 wherein said transition is requested based on a desired engine output.

12. (new) The method of claim 11 wherein said desired engine output is based on a request from an operator of a vehicle coupled to the engine.

13. (new) The method of claim 12 wherein said desired engine output is a desired engine torque.

14. (new) The method of claim 13 wherein said desired engine output represents an increase in said desired engine torque.

15. (new) A method for operating an engine, the method comprising:

in response to a decrease in requested engine output, operating a first group of cylinders without injected fuel and a second set of cylinder to combust a lean air-fuel mixture;

mixing gasses exhaust from the first and second cylinders; and

treating the mixed exhaust gasses in an emission control device capable of storing NOx in excess oxygen conditions.

16. (new) The method of claim 15 wherein said requested engine output is a requested engine output torque.

17. (new) The method of claim 16 wherein said desired engine output represents an increase in said desired engine torque.

18. (new) A method for controlling an engine having at least a first and second group of cylinders, comprising:

operating the engine in a first mode wherein the first cylinder group operates with air and substantially no injected fuel and the second cylinder group operates to combust air and injected fuel; and

transitioning the engine to operating in a second mode wherein both the first cylinder group and the second cylinder group operate to combust air and injected fuel, combustion in both said first and second cylinder group being lean of stoichiometry.

19. (new) The method recited in claim 18 wherein combustion in said second cylinder group in said first mode is near stoichiometric.

20. (new) The method recited in claim 19 wherein said transition is performed in response to a request to increase engine torque.

21. (new) A method for operating an engine, the method comprising:

in response to a decrease in requested engine output, operating a first group of cylinders without injected fuel and a second set of cylinder to combust a lean air-fuel mixture;

mixing gasses exhaust from the first and second cylinders; and

treating the mixed exhaust gasses in an emission control device capable of storing NOx in excess oxygen conditions.

22. (new) A system comprising:

an engine having variable valve operation, the engine having a first group of cylinders and a second group of cylinders; and

a controller for operating said first group of cylinders with air and substantially no injected fuel, and operating said second group of cylinders to combust a mixture of air and injected fuel.

23. (new) The system of claim 22 wherein said variable valve operation is variable cam timing.

24. (new) The system of claim 23 wherein said mixture is lean of stoichiometry.